

Help on the Resistor Task #5

Need some hints on how to do #5?

5. A circuit with a total resistance of $\frac{28}{11}$ has two parallel resistors. One of the resistors has a resistance of 4 ohms.
- Let x represent the resistance of the other of the other resistor, and write an equation for the total resistance of the circuit.
 - The equation in part a contains rational expressions. If you have any complex fractions, simplify them. In your equation containing no complex fractions, what is the least common denominator of the rational expressions?
 - Use the Multiplication Principle of Equality to obtain a new equation that has the same solutions as the equation in part a but does not contain any rational expressions. Why do you know that $x \neq 0$? How does knowing that $x \neq 0$ allow you to conclude that this new equation has the same solutions as, or is equivalent to, the equation from part a.
 - Solve the new equation to find the resistance in the second resistor. Check your answer.